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XVIII. *On the Tusks of the Narwhale.* By Sir Everard Home,
Bart. F. R. S.

Read February 18, 1813.

THE structure of many animals that inhabit the great Northern Ocean, is, even at this day, imperfectly known; this arises from those who have the best opportunities of making such enquiries not being fitted for them, or being too much engaged in pursuits of a different nature. Under such circumstances too much praise cannot be bestowed on the few individuals, whose zeal for science induces them to exert themselves in improving this branch of knowledge; to one of these, Mr. SCORESBY, jun. I am indebted for the means of making the following observations on the tusks of the narwhale.

Mr. SCORESBY told me, a year ago, that the female narwhale had no tusks, which astonished me; and the only reply I could make to such an assertion, was to beg that he would procure me a skull, that I might be satisfied of the fact. This he promised to do, and last summer sent me the skull of a female, in which there was no appearance whatever of tusks; and as the sutures were all united, there was every reason to believe the time of having teeth had elapsed, particularly as a male skull of the same size, and in which the sutures were not equally well united, had a tusk four feet long.

With such evidence before me, I was naturally led to adopt

the generally received opinion of the captains in the Greenland fishery, that the males had one tusk, and the females none; and as I imagined that I had cleared up a part of the natural history of this species of whale, which had hitherto been involved in obscurity, I proceeded to lay these observations before the Society. After I had done so, I found so many contradictory accounts among my friends, that I became staggered what to believe: some had seen two tusks of different lengths in the same skull, others believed they had seen two of the same length. To set the question at rest, my friend Mr. BROWN, Librarian to Sir JOSEPH BANKS, took the trouble of collecting all the books in Sir JOSEPH'S library, in which the subject is mentioned. In ANDERSON'S Description of Iceland, Greenland, and Davis's Straits, it is mentioned that, in 1684, DICK PETERSON brought to Hamburgh the skull of a female narwhale with two tusks, the left seven feet five inches, the right seven feet long, and that this skull had ever since been preserved there, and shewn to the curious. This account is copied by several later authors.

I found also, in TYCHO L. TYCHONIUS, an account, published in 1706, of a narwhale's skull with the left tusk seven feet long, and the right imbedded and completely concealed in the substance of the skull, nine Danish inches in length. The author takes some merit, and in my opinion deservedly, for having discovered it. A drawing of it *in situ* is annexed.

This information set me to work in sawing the skulls in the HUNTERIAN collection, to ascertain whether they contained rudiments of tusks not yet protruded from the substance of the bone, and the result of this investigation explains, in the most satisfactory manner, every thing that I have seen

written, or heard asserted upon this subject, and clears up any apparent difference between them.

In one male skull, in which the sutures were tolerably firmly united, the tusk in the left side is seven feet nine inches long; a small tusk, nine inches long, is imbedded in the bone on the right side, with a bulb or swelling at its root, and the point six inches from the front of the skull, which is quite solid, and has no external orifice.

In another male skull, which must have belonged to a younger animal, since the sutures are not completely united, the left tusk is four feet long, and the right one, concealed within the skull, is nine inches and three quarters long, and its point seven and a quarter distant from the front of the skull. In this specimen there is an external orifice leading down to the point of the young tusk, so that in this respect the small tusk is more advanced than in the older one, shewing that there is a great variety in the time of the second tusk coming forward.

The young tusks have not the spiral turns upon them, but are ribbed on the surface, and the ridges have a tendency to the left side. These are milk tusks, since they have come to their full growth, and are quite solid throughout their whole length, similar to the milk tusk of the elephant, which is however only two inches long before it is shed.

Upon sawing a full grown tusk in a longitudinal direction, I found that, contrary to what happens in the tusks of other animals, there is a hollow tube in the middle through the greater part of its length, the point, and the portion at the root, only being solid.

From these two specimens, there can be no doubt that the

left tusk appears commonly long before the right one, which corresponds with the accounts given by the captains employed in the Greenland fishery. One of these captains, who has been thirty-five voyages, informed me that he never saw a male narwhale with two tusks, except once from the mast head; the animal was rising out of the water, the left tusk was about six feet above the surface, and the point of the right tusk just out of the water, so that it appeared to him one-third the length of the left.

In the skull of the female sent me by Mr. SCORESBY, the sutures are more united than in the smallest of the males which I have described; there is no appearance whatever of tusks externally, but both on the right and left side there is an orifice in the bone, and when the skull was cut into, two small milk tusks were discovered of the same size and appearance, and exactly resembling those described in the male; they were eight inches long, and the points were only two inches and a quarter from the front of the skull, lying in a canal, of which the external opening was the orifice, so that they were nearer getting into the gum than those of either of the males; and there can be no doubt that the permanent tusks, which were to follow them, would be of equal lengths, or nearly so throughout their growth, as they were found to be in the skull at Hamburgh. We learn also, from this specimen, that the tusks in the female come much later than in the male, which explains the error the captains of the Greenland ships have been led into, of the females having no tusks.

Female skulls, with full grown tusks, must be rarely met with, since the only well authenticated account upon record

of a skull with two tusks of equal lengths, is that given by DICK PETERSON.

These facts make it necessary to take from this species of whale the name given to it by LINNÆUS, of *Monodon Monoceros*, since they prove that it is a very improper one.

The greatest length which has been given to the left tusk, before the right has cut the gum, is fifteen feet: this account is mentioned by EGEDE in his *Natural History of Greenland*, 1741.

The lower jaw, both in the male and female, has a rounded edge, in which there is no part from which teeth can grow.

EXPLANATION OF THE PLATE.

(See Plate VII.)

Fig. 1. The young skull of a male narwhale, shewing the permanent tusk in its socket, the milk tusk ready to be protruded.

Fig. 2. The female skull, with the two milk tusks ready to be protruded, having acquired their full size, and canals being formed through which the points are to pass out.

Fig. 3. A section of a milk tusk to shew that it is solid.

Fig. 4. The lower jaw, in which there is no place for teeth.

Fig. 5. A section of a full grown tusk, to shew the cavity in the middle, and that the parts at the point and at the root are solid.

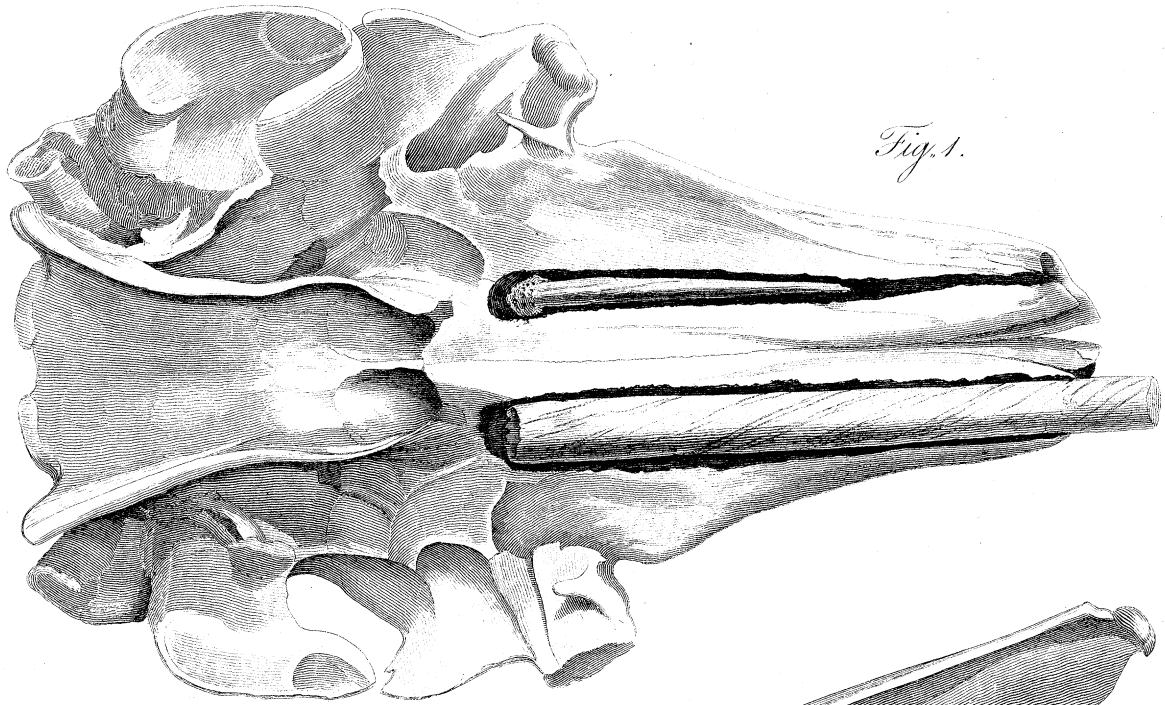


Fig. 1.

3 Inches to a Foot

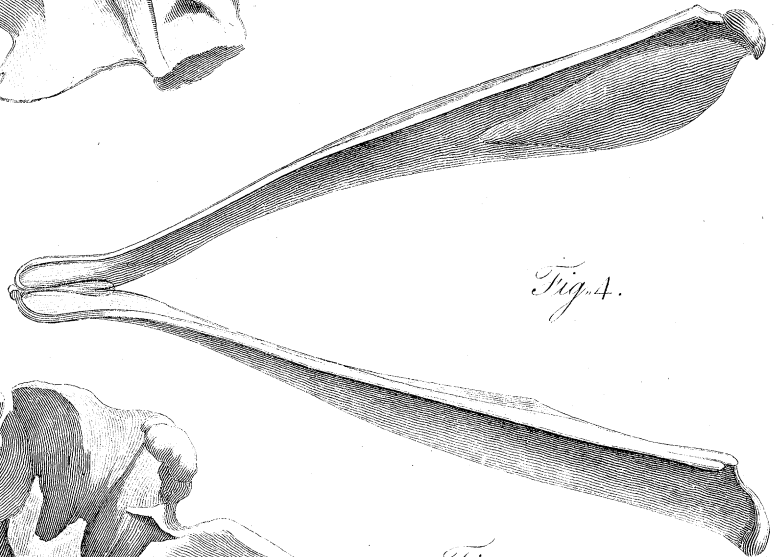


Fig. 4.

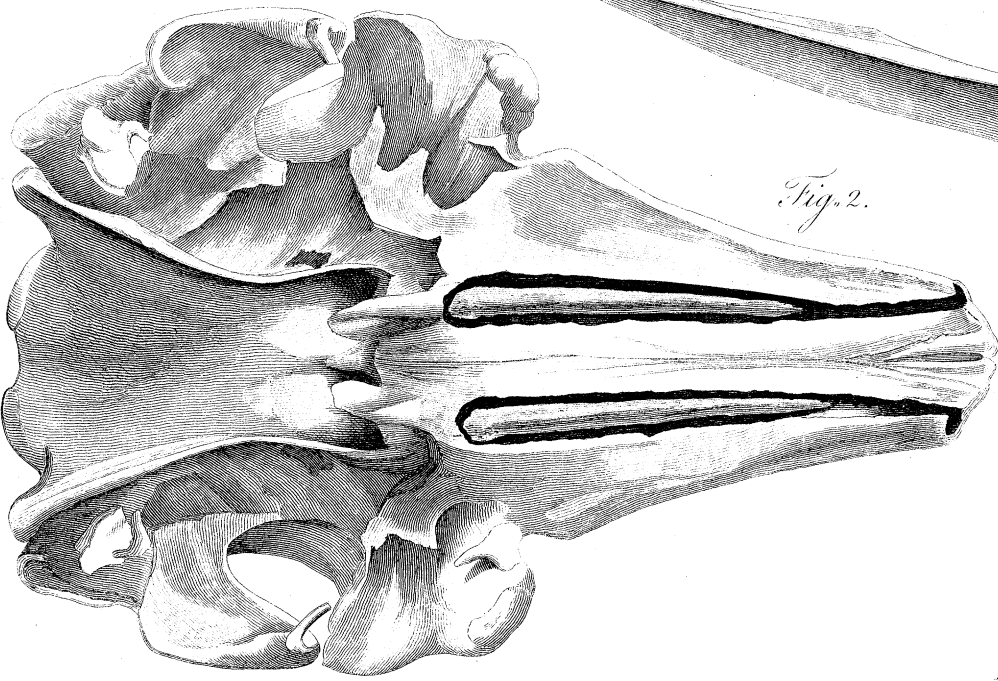


Fig. 2.

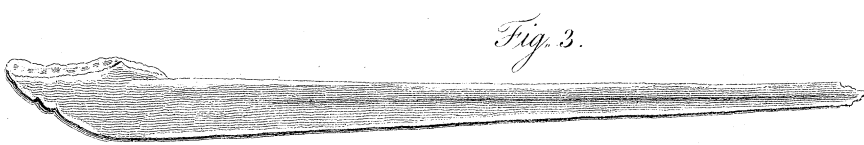


Fig. 3.

6 Inches to a Foot.

Fig. 5.

1 Inch & 1/4 to a Foot.

